

BiX-10 Series

User Manual



Preface

Important information

※NOTICE


Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.




The addition of this symbol to a Danger or Warning safety label indicates that an electrical hazard exists, which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

 DANGER
DANGER indicates an hazardous situation, which, if not avoided, will result in death or serious injury.

 WARNING
WARNING indicates potentially hazardous situation, which if not avoided, can result in death, serious injury or equipment damage.

 CAUTION
CAUTION indicates a potentially hazardous situation, which, if not avoided, can result in injury or equipment damage.

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel.



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Easy Installation



User Friendly



Auto Control



Constant Pressure

Content	Description
Operation Method	Individual Inverter Operation (Parallel up to 3 pumps)
Display	2.42" OLED with keypad
Language	Korean / English
Input Voltage	220 ~ 240 V
Temperature & humidity	-10~40°C / 90%
Run History	Run-time record and display
Alarm History	Records and display's up to 20 alarms
Other Functions	Auto Reset, Low Pressure Alarms, Dry Run Protection, etc.



Icon	Description
	System Stop/ Mode (Entering the parameters)
	System Run
	Moving the digit locations from left to right
	Changing the values and navigating through the parameters
	To confirm the settings

Quick Settings

Content	Description
Parameter setting	- Firmly press button for 2-3 seconds.
Auto/Manual mode	- Firmly press + buttons for 2-3 seconds.
Alarm history	- Firmly press button for 2-3 seconds.
Operation history	- Firmly press button for 2-3 seconds.
Deleting the alarm history	* After entering the Alarm History menu - Firmly press + buttons for 2-3 seconds.
Deleting the operation history	* After entering the Operation History menu - Firmly press + buttons for 2-3 seconds.



Content	BiX-1007M	BiX-1015M	BiX-1022M
Protection Class	IP55		
Motor [kW]	0.75	1.5	2.2
Rated Input AC Voltage	1Phase 220V/240V (+/-15%)		
Rated Output Voltage [V]	3Phase 220V/240V		
Rated Output Current [A]	2.4	4.7	7.1
Output Frequency Range [Hz]	70 Hz		
Voltage/Frequency Characteristic	V/F control		
Overload Rated Current	150% of rated current		
Ambient Temperature	-10°C ~ 40°C		
Protections	Auto Reset, Dry Run Protection, etc		

● Control Parameter Setting

Content	Input Range	Unit	Default
Set Pressure	0.1 ~ 20.0	bar	2.0
	10 ~ 300	psi	30
Run Deviation	-3.0 ~ -0.2	bar	-0.3
	-50 ~ -3	psi	-5
Stop Delay	3.0 ~ 999.9	sec	5.0
Restart Delay	0 ~ 9999	sec	0
Shift Time	0 ~ 9999	Min	60
Maximum Runtime	0 ~ 999	Min	0
P	1 ~ 200		25
I	1 ~ 200		40
D	1 ~ 200		40
Low Pressure Alarm	[Used] [Not Used]		[Used]
Low Pressure Value	0.1 ~ 10.0	bar	0.3
	1 ~ 140	psi	5
Low Pressure Stop	0 ~ 999	sec	10
Low Pressure Restart	0 ~ 999	sec	10
Low Pressure Restart Time	0 ~ 20	cycle	3
Pressure Unit	[bar] [psi]		[bar]

- Set Pressure	Refers to the operating set pressure.
- Run Deviation	Refers to the run deviation in which the operating of the system starts.
- Stop Delay	Refers to the stop delay time of the system.
- Restart Delay	Refers to the restart delay time of the system.
- Shift Time	Refers to the time when the lead pump alternates.
- Maximum Runtime	Refers to the maximum runtime to stop the operation of the pump.
- P	It is relevant to 'P'(Proportional Constant) out of the PID controls.
- I	It is relevant to 'I'(Integral Constant) out of the PID controls.
- D	It is relevant to 'D'(Differential Constant) out of the PID controls.
- Low Pressure Alarm	if the operation pressure is lower than the set pressure, alarm will occur.
- Low Pressure Value	Setting the low pressure limit.
- Low Pressure Stop	Once the low pressure alarm occurs, the system will operate duration of the set delay time and afterwards the system will stop.
- Low Pressure Restart	Setting the low pressure restart time. The system will restart after the set value.
- Low Pressure Restart Time	Setting the low pressure restart cycle. The system will stop after the set cycle.
- Pressure Unit	Setting the Pressure unit.

● Function Parameter Setting

Content	Input Range	Unit	Default
Sensor Range	0.2 ~ 20.0	bar	10.0
	10 ~ 300	psi	160
Sensor Offset	-9.9 ~ 9.9	bar	0.0
	-99 ~ -99	psi	0
Auto Reset	0 ~ 20	cycle	5
Min. Out Rate	30.00 ~ 70.00	%	50.00
Stop Rate	30.00 ~ 95.00	%	65.00
Motor Direction	[Forward] [Backward]		[Forward]
Low Current Alarm	[Used] [Not Used]		[Used]
Low Current Value	0.0 ~ 99.9	A	2.0
Low Current Stop	1 ~ 999	sec	10

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- Sensor Range To set-up the rated capacity of the pressure sensor utilized.
 - Sensor Offset To correct the variation between the value of the pressure sensor and actual pressure value.
 - Auto Reset Refers to the number of times the system will reset once an alarm occurs.

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- Min. Op. Rate Refers to the minimum output.
 - Stop Rate Refers to the stop output.
 - Motor Direction Direction of the motor.
 - Low Curr. Alarm Refers to the Stop output.
 - Low Curr. Value Refers to the set point [Amp.] where the low current alarm occurs.
 - Low Curr. Stop Refers to the set time the system will stop once the low current occurs.

● VFD Control Parameter Setting

Content		Input Range	Unit	Default
Max. Output Frequency		5.0 ~ 70	Hz	60.0
Max. Voltage Frequency		5.0 ~ 70	Hz	60.0
Max. Voltage		50 ~ 250	VAC	220
Mid-Point Frequency		5.0 ~ 70	Hz	30
Mid-Point Voltage		0 ~ 250	VAC	100
Min. Output Frequency		0.10 ~ 20.00	Hz	1.50
Min. Output Voltage		3.0 ~ 200	VAC	15
Acceleration Time		1.0 ~ 120	sec	3.0
Deceleration Time		1.0 ~ 120	sec	3.0
Stop Mode		[Ramp to Stop] [Coast to Stop]		[Coast to Stop]
Motor HP	BiX-1007M	[0.5HP] [0.75HP] [1.0HP]		[1.0HP]
	BiX-1015M	[0.5HP] [0.75HP] [1.0HP] [1.5HP] [2.0HP]		[2.0HP]
	BiX-1022M	[0.5HP] [0.75HP] [1.0HP] [1.5HP] [2.0HP] [2.5HP] [3.0HP]		[3.0HP]
Overload Rate		50 ~ 200	%	150
Overload Time		2.0 ~ 999	sec	10.0
Over-Voltage Rate		100 ~ 200	%	120
Low-Voltage Rate		70 ~ 90	%	80
Carrier Frequency		3.0 ~ 15.0	kHz	8.0

Max. Output Frequency	This parameter determines the inverters max. output frequency.
Max. Voltage Frequency	This value should be set according to the rated frequency of the motor.
Mid-Point Freq.	Refers to the mid-point frequency of the V/F curve. The V/F ratio between the min. frequency and mid-point frequency can be determined.
Mid-Point Voltage	Refers to the mid-point voltage of any V/F curve. The V/F ratio between the min. frequency and mid-point frequency can be determined.
Min. Output Frequency	Refers to the min. output frequency of the inverter.
Min. Output Voltage	Refers to the min. output voltage of the inverter.
Acceleration Time	Refers to the time required for the inverter to accelerate from 0 Hz to its max. output frequency.
Deceleration Time	Refers to the time required for the inverter to decelerate from the max. output frequency down to 0Hz.
Stop Mode	<ol style="list-style-type: none"> 1. Ramp: the inverter decelerates the motor to min. output frequency then stops according to the set deceleration time. 2. Coast: the inverter stops output instantly upon command, and the motor free runs until it comes to a complete stop.
Motor HP	Displays the inverter HP that is currently being utilized.
Overload Rate	Refers to the trip current level against the rated current of the motor.
Overload Time	Refers to the maintaining time of the overload trip level to generate the overload trip.
Over-Voltage Rate	Refers to over-voltage protection.
Low-Voltage Rate	Refers to the low-voltage protection.
Carrier Frequency	Refers to the trip current level against the rated current of the motor.

● System Parameter Setting

Content	Input Range	Unit	Default
Power Outage Restart	[System Stop] [System Run] [Backup State]		[System Stop]
Language	[한국어] [English]		[English]
Password (0000: Not Used)	0000 ~ 9999		0000
Test Code	0000 ~ 9999		0000

Display	Alarm Type	Corrective Action
Comm Fail	Communication Fail	- Check the connection status between the master and slave pumps
Sensor Open	Sensor Open	- Check if the sensor connection has been properly performed. Replace the sensor if the error still occurs after checking the connection
Sen.Short	Sensor Short	- Check if the sensor connection has been properly performed. Replace the sensor if the error still occurs after checking the connection
Low Pres.	Low Pressure	- Check if the suction pipeline is filled with water and also release air from the air vent on the pump if necessary
L-Pre. Stop	Low Pressure Stop	- Check if the suction pipeline is filled with water and also release air from the air vent on the pump if necessary
Low Current	Low Current	- Check if the suction pipeline is filled with water and also release air from the air vent on the pump if necessary
L-Cur. Stop	Low Current Stop	- Check if the suction pipeline is filled with water and also release air from the air vent on the pump if necessary
Overload	Overload	- Check the rated current of the motor and the rated current setting on the inverter
Over Cur.	Over Current	- Check the Acc./Dec time. Also, check if the inverter capacity is suitable for the motor that is being installed
Low Volt.	Low Voltage	- Check the input voltage and power capacity
Over Heat	Over Heat	- Contact your local supplier
Over Volt.	Over Voltage	- Check the supply voltage and increase the deceleration time

Warranty

ID COMPANY LIMITED guarantees the quality of the product authorized has passed all of the required QC procedures. Warranty periods and warranty services are varied in accordance with the region where the customer purchased the product. The period applies from the date of the purchase by the first customer. The warranty only covers manufacturing defects.

Product	BiX-10	Warranty	
Model	BiX-10	Date from	
Place		Agent	

The cost of repair and/or replacement of the product under warranty.

The warranty is invalidated if the defect is caused by misuse, neglect, and tampering or incorrect adjustment.

It is invalidated if unauthorized persons carry out any alterations and/or repairs.

Also, the warranty is invalidated in the following cases:

- **For repair due to incorrect installation by customer's discretion**
- **For repair to any product where the serial number has been removed**

To obtain technical assistance or to book a service/repair to your product under warranty, please contact your local supplier.

When contacting us for customer service, please have your model number, serial number and date of purchase ready when calling for better assistance.



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